

**PATENT APPLICATION**  
**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re application of

Docket No: A8563

Nigel SIMMONS, et al.

Appln. No.: 10/564,638

Group Art Unit: 2151

Confirmation No.: 3356

Examiner: Not Yet Assigned

Filed: January 13, 2006

For: SOCIAL NETWORK OF IDENTITIES AND QUERY METHOD THEREFOR

**PETITION UNDER 37 C.F.R. § 1.47(a)**

**MAIL STOP AMENDMENT**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

Pursuant to 37 C.F.R. §1.47(a), Applicants hereby petition to proceed with the prosecution of the above-identified application, which names (1) Nigel SIMMONS, (2) Scott BIRNBAUM, and (3) Adarbad MASTER inventors. A Declaration and Power of Attorney is submitted herewith, which is executed by all of the above inventors, except for (3) Mr. Adarbad MASTER hereafter "Mr. Master."

The basis for this Petition is that one of the inventors, Mr. Master, cannot be found or reached after diligent efforts have been made to contact and locate him to have him sign a Declaration for the present application. In connection with this Petition, applicants are submitting concurrently herewith a Statement of Facts with attached Exhibits 1-5. The Statement of Facts is signed by Mr. Nigel Simmons, one of the named inventors of the present application who is responsible for administration of patent matters for the assignee, Ayman LLC.

PETITION UNDER 37 C.F.R. § 1.47(a)  
Application No. 10/564,638  
Attorney Docket No. A8563

The Statement of Facts sets forth the factual circumstances surrounding the inability to obtain the signature of Mr. Master and the efforts made to obtain the signature of Mr. Master. The last known address at which Mr. Master customarily receives mail is set forth in the Statement of Facts.

Submitted herewith is a check in the amount of \$130.00 for the petition fee. Please charge any deficiency or credit any overpayment to our Deposit Account No. 19-4880. Please also charge any fees necessary to maintain the pendency of this application, except for the Issue Fee, to our Deposit Account No. 19-4880. A duplicate copy of this paper is attached.

Respectfully submitted,



J. Warren Lytle, Jr.  
Registration No. 39,283

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

Date: December 5, 2006

**PATENT APPLICATION**  
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**STATEMENT OF FACTS**

**MAIL STOP AMENDMENT**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

I, Nigel Simmons, residing at Potomac, Maryland, declare and state as follows:

1) I am employed by EPOK, Inc., a wholly owned subsidiary of Ayman LLC an assignee of the present application, since July 22, 2002, and I have firsthand knowledge of the following facts.

2) My title is Vice President Product Management at EPOK, Inc. My responsibilities at EPOK, Inc. included the preparation of a patent application for an invention entitled Social Network of Identities and Query Method Therefor, in the name of three inventors, including Mr. Adarbad Master (hereafter "Mr. Master"), who at the time was an employee of EPOK, Inc. An international patent application (International Application No. PCT/US2004/018933) for this invention was filed on July 15, 2004 (hereinafter the "International Application"). A national stage application for this invention was filed in the U.S.

## STATEMENT OF FACTS

Application No. 10/564,638

Attorney Docket No.: A8563

Patent and Trademark Office on January 13, 2006 without any Declaration and received U.S.

Application No. 10/564,638 (hereinafter the "National Stage Application").

3) Prior to filing the International Application I sent a copy of the application to each of the inventors to review and provide me with their comments. The International Application was filed on July 15, 2004. Mr. Master was employed by EPOK, Inc. when I sent him the application for his review and at the time the International Application was filed. At the time of filing the National Stage Application on January 13, 2006, Mr. Master was no longer employed by EPOK, Inc.

4) After receiving the "Notification Of Missing Requirements Under 35 U.S.C. 371 In The United States Designated/Elected Office (DO/EO/US)" dated May 5, 2006 from the USPTO, I sent Mr. Master an email message on August 3, 2006 informing him of the need to sign a Declaration and an assignment document for the National Stage Application. Mr. Master responded, via return email, that same day indicating a willingness to sign both documents. I sent another email later that same day requesting a mailing address to which I could send Mr. Master the Declaration and assignment documents. However, Mr. Master never responded to my request for a mailing address. A copy of my email exchange with Mr. Master on August 3, 2006 is attached as Exhibit 1.

5) As I did not receive a response to my request for a mailing address with Mr. Master, on August 28, 2006, I sent Mr. Master another email message again requesting a mailing address to which I could send him the Declaration and Assignment documents for the National

STATEMENT OF FACTS

Application No. 10/564,638

Attorney Docket No.: A8563

Stage Application. A copy of my August 28, 2006 email to Mr. Master is attached as Exhibit 2.

I never received a response from Mr. Master to my August 28, 2006 email message.

6) Again, not receiving a response from Mr. Master, I sent him another email message on September 1, 2006, attaching the Declaration and Assignment documents for the National Stage Application and requesting that he execute those documents and return them to me. A copy of my September 1, 2006 email to Mr. Master, and its attachments, is attached here as Exhibit 3. I never received a response from Mr. Master to my September 1, 2006 email message, nor did I receive copies of the Declaration and Assignment documents executed by Mr. Master.

7) The last known mailing address at which Mr. Master customarily receives mail (his home address), which he had provided to EPOK, Inc. at the time he resigned, is the following address.

Mr. Adarbad Master  
1240 India St., #1910  
San Diego, CA 92101

8) On November 28, 2006, I sent a copy of the International Application (now International Patent Publication No. WO 2005/015470) and the Declaration and Assignment documents attached here in Exhibit 4, along with a cover letter to Mr. Master at the above last known mailing address. The documents were sent by via overnight courier (FedEx). Attached as Exhibit 5 is a copy of a FedEx International Air Way Bill and detailed results of track shipments, which shows that the documents were sent to Mr. Master at his last known address on

STATEMENT OF FACTS

Application No. 10/564,638

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November 28, 2006, set forth above, and were received by someone unknown to me. However, I have not heard from Mr. Master, and cannot determine who actually received the documents.

9) As of today, neither I nor EPOK, Inc. has received the executed Declaration or further communications from Mr. Master, and the documents I sent to him by certified mail have not been returned to me or EPOK, Inc.

Date: 12 / 1 / 06

W.N. Simmons

Nigel Simmons  
VP Product Management  
EPOK, Inc.

**PATENT APPLICATION**  
**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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Docket No: A8563

Nigel SIMMONS, et al.

Appln. No.: 10/564,638

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Alexandria, VA 22313-1450

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The basis for this Petition is that one of the inventors, Mr. Master, cannot be found or reached after diligent efforts have been made to contact and locate him to have him sign a Declaration for the present application. In connection with this Petition, applicants are submitting concurrently herewith a Statement of Facts with attached Exhibits 1-5. The Statement of Facts is signed by Mr. Nigel Simmons, one of the named inventors of the present application who is responsible for administration of patent matters for the assignee, Ayman LLC.

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Application No. 10/564,638  
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Submitted herewith is a check in the amount of \$130.00 for the petition fee. Please charge any deficiency or credit any overpayment to our Deposit Account No. 19-4880. Please also charge any fees necessary to maintain the pendency of this application, except for the Issue Fee, to our Deposit Account No. 19-4880. A duplicate copy of this paper is attached.

Respectfully submitted,



J. Warren Lytle, Jr.  
Registration No. 39,283

SUGHRUE MION, PLLC  
Telephone: (202) 293-7060  
Facsimile: (202) 293-7860

WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

Date: December 5, 2006



In re Appln. of Nigel Simmons et al.  
Appln. No. 10,564,638  
Statement of Facts

## Exhibit 1

**Lytle, Jay W.**

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**From:** Nigel Simmons [Nigel.Simmons@epok.net]  
**Sent:** Thursday, August 03, 2006 6:09 PM  
**To:** Adarbad Master  
**Subject:** RE: Contact from Epok

Adarbad,

Really very sorry to hear the news about your Dad. We always think we have important things to do and deadlines to meet - but its times like that that you realize what the really important things in life are all about. I'm so glad that you were able to be there; it doesn't change the situation, but hopefully gives you some piece of mind that you had nothing to regret. From experience I can tell you that time doesn't heal, as much as allow you to get used to it.

With respect to signatures - I was hoping to Fedex/DHL/mail some documents to you, and perhaps you might return them signed. Some advice on the best method, and an address would be nice :)

Just spent 10months turning the relationship stuff into a full-blown server + applications product for Information Sharing Environment - the mandate from the Federal Government and the subject of three markle reports. All the Engineering wars subsided with Davis' departure and you'd be proud how the team has pulled together.

Best wishes,

Nige

Nigel Simmons  
 VP Product Management  
 4340 East West Highway, Suite 300  
 Bethesda, MD 20814  
 Email: Nigel.Simmons@epok.net  
 Phone: +1.301.961.1760  
 Fax: +1.301.951.5988  
<http://www.epok.net/>

This email message may contain confidential business information of Epok, Inc. If you receive this email by mistake, please notify the sender immediately and delete it from your computer. Copying or dissemination of this email to unintended parties is prohibited and may result in prosecution.

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**From:** Adarbad Master [mailto:amaster@simplifyllc.com]  
**Sent:** Thursday, August 03, 2006 2:04 PM  
**To:** Nigel Simmons  
**Subject:** RE: Contact from Epok

Hi Nigel:

Up to my eyeballs indeed! I am in Pune, India chilling out with my family and working on cool projects. Bad piece of news is that the raison d'etre for my India trip, my Dad, passed away about a month ago. I am just glad I was there. Have decided to concentrate on family more and less on work....Nive doesn't think I stand a chance of succeeding ☺

If you can figure out how I can give you signatures from India, let me know...always glad to help.

Hope you are doing well and taking care of your health. Also hopeful that the company is succeeding in its mission...I wish you guys all the best. Let me know how I can help.

11/27/2006

Regards,

Adarbad

---

**From:** Nigel Simmons [mailto:Nigel.Simmons@epok.net]

**Sent:** Thursday, August 03, 2006 6:58 PM

**To:** amaster@simplifyllc.com

**Subject:** Contact from Epok

Hey Adarbad,

Hope you're well and more settled than previously - you're the only person I know that has driven cross-country more than five times!!

When I say "settled" - I just can't imagine that you're not up to your eyeballs in projects, perhaps they're confined to one continent!

If you're still reading this mail that's good. Epok is still pursuing patents with your name on them, and I wondered if I could get some signatures from you. It's another couple patents for the list after all.

Nige

Nigel Simmons

VP Product Management

4340 East West Highway, Suite 300

Bethesda, MD 20814

Email: Nigel.Simmons@epok.net

Phone: +1.301.961.1760

Fax: +1.301.951.5988

<http://www.epok.net/>

This email message may contain confidential business information of Epok, Inc.

If you receive this email by mistake, please notify the sender immediately and delete it from your computer. Copying or dissemination of this email to unintended parties is prohibited and may result in prosecution.

11/27/2006

In re Appln. of Nigel Simmons et al.  
Appln. No. 10,564,638  
Statement of Facts

## Exhibit 2

**Lytle, Jay W.**

---

**From:** Nigel Simmons [Nigel.Simmons@epok.net]

**Sent:** Monday, August 28, 2006 10:35 AM

**To:** adarbad@simplifyllc.com

**Subject:** Any chance of that mailing address?

Hey Adarbad,  
Hope you're well.

Is there any chance I could get a mailing address for you - so that I could get your signature on a patent application please.

thanks,

Nige

11/27/2006

In re Appln. of Nigel Simmons et al.  
Appln. No. 10,564,638  
Statement of Facts

## Exhibit 3

**Lytle, Jay W.**

---

**From:** Nigel Simmons [Nigel.Simmons@epok.net]  
**Sent:** Friday, September 01, 2006 2:41 PM  
**To:** amaster@simplifyllc.com  
**Subject:** FW: A8563 Social Networking patent application - Declaration and Assignment

Hey Adarbad,  
Hope this finds you well (and prosperous)!

I mentioned signatures for patents. If there was a chance that you could fill in some address detail in the attached docs and then returned scanned versions with your signature that would be great.

Feel free to print them out and hand-write the detail.

I'm trying to get them filed by Sep5

thanks and have a good weekend,

Nige

---

**From:** Lytle, Jay W. [mailto:jlytle@sughrue.com]  
**Sent:** Friday, September 01, 2006 2:04 PM  
**To:** Nigel Simmons  
**Subject:** A8563 Social Networking patent application - Declaration and Assignment

Nigel,

Attached are the Declaration and Assignment documents for you, Scott and Adarbad to sign and date (and Adarbad needs to fill in his contact information) for the Social Network patent application, along with my cover letter with further instructions. Please return the signed documents to me by next Tuesday, Sept. 5, if possible, otherwise the extension fees will escalate. As always, call me if you have any questions.

<<A8563 Letter Forwarding Dec and Assign.PDF>> <<A8563 Declaration.DOC>> <<Assignment.DOC>>

Jay Lytle  
Sughrue Mion, PLLC  
2100 Pennsylvania Ave., N.W.  
Washington, D.C. 20037-3213  
T: (202) 663-7458  
F: (202) 293-7860

The information contained in this communication is confidential, may be attorney-client privileged, and is intended only for the use of the addressee. Unauthorized use, disclosure or copying is strictly prohibited and may be unlawful. If you have received this communication in error, please immediately notify us.

11/27/2006



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F 202.293.7860  
www.sughrue.com

J. Warren Lytle, Jr.  
T 202-663-7458  
jlytle@sughrue.com

September 1, 2006

**Via Email**

Mr. Nigel Simmons  
AYMAN, LLC  
4340 East West Highway, Suite 300  
Bethesda, Maryland 20814

Re: Declaration and Power of Attorney and Assignment Documents  
Application No.: 10/564,638  
A SOCIAL NETWORK EMPLOYING DIGITAL IDENTITIES  
Inventor: SIMMONS, Nigel, et al.  
Our Ref: A8563  
PTO Mail Date: May 5, 2006 (Notice to File Missing Parts)  
Due Date: September 5, 2006 (with two month extension)  
**Final Due Date: December 5, 2006**

Dear Nigel:

Further to my email of August 2, 2006 and our telephone conversation today, I am attaching a copy of the Declaration and Power of Attorney and an Assignment document to be signed by each of the inventors, namely you, Scott Birnbaum and Adarbad Master. The formal documents must be submitted no later than December 5, 2006 but it would be better to file them by September 5, 2006 to reduce the amount of the extension of time fees required.

Please have each of the inventors sign and date both documents and return to me by email.

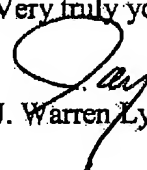
Redacted

Please have Adarbad fill in his address and residence on the Declaration and his residence on the Assignment and place his initials next to any handwritten information.

Redacted

I look forward to receiving the executed documents.

Very truly yours,

  
J. Warren Lytle, Jr.

JWL/dmr  
Enclosures



**DECLARATION AND POWER OF ATTORNEY FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)**

As a below named inventor, I hereby declare that: My residence, mailing address, and citizenship are as stated below next to my name. I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**A SOCIAL NETWORK EMPLOYING DIGITAL IDENTITIES**

the application of which

☐ is attached hereto

OR

☒ was filed on January 13, 2006 as United States Application Number or PCT International Application Number 10/564,638 and was amended on \_\_\_\_\_ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified application, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part application(s), material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application(s) which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application(s) having a filing date before that of the application on which priority is claimed.

Prior Application Number(s)	Country	Filing Date	Priority Claimed	
			Yes	No
			<input type="checkbox"/>	<input checked="" type="checkbox"/>

I hereby claim benefit under 35 United States Code §119(e) of any United States provisional application(s) listed below.

Application Number(s)	Filing Date
60/487,191	July 15, 2003

I hereby claim benefit under 35 United States Code §120 of any United States application(s) or §365(c) of any PCT International application(s) designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in a listed prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge my duty to disclose any information material to the patentability of this application as defined in 37 C.F.R. 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

Prior U.S. or International Application Number(s)	U.S. or International Filing Date	Status
PCT/US2004/018933	July 15, 2004	

I hereby appoint all attorneys of **SUGHRUE MION, PLLC** who are listed under the USPTO Customer Number shown below as my attorneys to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith, recognizing that the specific attorneys listed under that Customer Number may be changed from time to time at the sole discretion of Sughrue Mion, PLLC, and request that all correspondence about the application be addressed to the address filed under the same USPTO Customer Number.

WASHINGTON OFFICE  
**23373**  
CUSTOMER NUMBER

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

<b>NAME OF SOLE OR FIRST INVENTOR:</b>				
Given Name (first and middle [if any])		Family Name or Surname		
Scott		Birnbaum		
Inventor's Signature			Date	
Residence: City	New York	State	New York	Citizenship
			USA	U.S. and France
Mailing Address: EPOK, Inc., 4340 East West Highway				
City	Bethesda	State	Maryland	Country
			20814	U.S.A.
<b>NAME OF SECOND INVENTOR:</b>				
Given Name (first and middle [if any])		Family Name or Surname		
Nigel		Simmons		
Inventor's Signature			Date	
Residence: City	Potomac	State	Maryland	Citizenship
			U.S.A.	
Mailing Address: EPOK, Inc., 4340 East West Highway				
City	Bethesda	State	Maryland	Country
			20814	U.S.A.
<b>NAME OF THIRD INVENTOR:</b>				
Given Name (first and middle [if any])		Family Name or Surname		
Adarbad		Master		
Inventor's Signature			Date	
Residence: City		State		Citizenship
				U.S.
Mailing Address:				
City		State		Country

## Assignment

Whereas, we, Scott Birnbaum of New York, New York, Nigel Simmons of Potomac, Maryland, and Adarbad Master of \_\_\_\_\_, India, hereinafter called assignor(s), have invented certain improvements in A SOCIAL NETWORK EMPLOYING DIGITAL IDENTITIES, hereinafter called the invention, and on July 15, 2003 filed a United States Provisional Patent Application, hereinafter called the application, therefor, the application having application serial number 60/487,191 and confirmation number 6124;

Whereas, Ayman LLC, 4340 East West Highway, Suite 300, Bethesda, Maryland 20814 (assignee), desires to acquire the entire right, title, and interest in the application and invention, and to any United States patents to be obtained therefor;

Now therefore, for valuable consideration, receipt whereof is hereby acknowledged,

We, the above named assignors, hereby sell, assign and transfer to the above named assignee, its successors and assigns, the entire right, title and interest in the application and the invention disclosed therein for the United States of America and all countries foreign thereto, including rights of priority under the International Convention of Paris (1883) as amended, and we request the Director of the U.S. Patent and Trademark Office to issue any Letters Patent granted upon the invention set forth in the application to the assignee, its successors and assigns; and we hereby agree that the assignee may apply for foreign Letters Patent on the invention and we will execute without further consideration all papers deemed necessary by the assignee in connection with the United States and foreign applications when called upon to do so by the assignee.

Further, we agree that we will communicate to assignee, or its representatives, any facts known to us respecting said invention, and testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, substitution, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to assignee, make all rightful oaths and generally do everything possible to aid assignee and its successors and assigns to obtain and enforce proper protection for the invention in the United States and in any and all foreign countries.

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Nigel Simmons

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Scott Birnbaum

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Adarbad Master

(Legalization not required for recording but is prima facie evidence of execution under 35 U.S.C. §261)

In re Appln. of Nigel Simmons et al.  
Appln. No. 10,564,638  
Statement of Facts

## Exhibit 4



Adarbad Master  
1240 India St, #1910  
San Diego, CA 92101

November 28, 2006

RE: Patent Declaration and Assignment A8563

Dear Adarbad,

Enclosed is a copy of our patent application entitled "Social Network of Identities and Query Method Therefor" International Patent Application No. PCT/US2004/018933, which, as you know, was prepared and filed while you were at EPOK, Inc. We have filed a national stage patent application in the U.S. for this invention and the U.S. Patent and Trademark Office (USPTO) requires all of the named inventors to sign a Declaration stating they are the true inventors of the subject matter being claimed. Also enclosed is an Assignment document in which each of the inventors assigns the rights in the invention to Ayman LLC.

Please read, sign and date the enclosed Declaration and Assignment documents and send them back, preferably by email to [Andy.Ireland@epok.net](mailto:Andy.Ireland@epok.net) and the originals by mail or express carrier. Please send the signed documents back to me so that I receive at least a copy of them no later than December 4, 2006 as we must submit the Declaration to the USPTO no later than December 5, 2006.

Sincerely,

A handwritten signature in black ink, appearing to read "W.N. Simmons", with a stylized flourish at the end.

Nigel Simmons  
VP Product Management  
EPOK Inc

(Nigel.Simmons@epok.net)

**DECLARATION AND POWER OF ATTORNEY FOR UTILITY OR DESIGN PATENT APPLICATION (37 CFR 1.63)**

As a below named inventor, I hereby declare that: My residence, mailing address, and citizenship are as stated below next to my name. I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

**A SOCIAL NETWORK EMPLOYING DIGITAL IDENTITIES**

the application of which

☐ is attached hereto

OR

☒ was filed on January 13, 2006 as United States Application Number or PCT International Application Number 10/564,638 and was amended on \_\_\_\_\_ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified application, including the claims, as amended by any amendment specifically referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56, including for continuation-in-part application(s), material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority under 35 U.S.C. 119(a)-(d) or (f), or 365(b) of any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or 365(a) of any PCT international application(s) which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application(s) for patent, inventor's or plant breeder's rights certificate(s), or any PCT international application(s) having a filing date before that of the application on which priority is claimed.

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			<input type="checkbox"/>	<input checked="" type="checkbox"/>

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I hereby appoint all attorneys of **SUGHRUE MION, PLLC** who are listed under the USPTO Customer Number shown below as my attorneys to prosecute this application and to transact all business in the United States Patent and Trademark Office connected therewith, recognizing that the specific attorneys listed under that Customer Number may be changed from time to time at the sole discretion of Sughrue Mion, PLLC, and request that all correspondence about the application be addressed to the address filed under the same USPTO Customer Number.

WASHINGTON OFFICE  
**23373**  
CUSTOMER NUMBER

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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## Assignment

Whereas, we, Scott Birnbaum of New York, New York, Nigel Simmons of Potomac, Maryland, and Adarbad Master of \_\_\_\_\_, India, hereinafter called assignor(s), have invented certain improvements in A SOCIAL NETWORK EMPLOYING DIGITAL IDENTITIES, hereinafter called the invention, and on July 15, 2003 filed a United States Provisional Patent Application, hereinafter called the application, therefor, the application having application serial number 60/487,191 and confirmation number 6124;

Whereas, Ayman LLC, 4340 East West Highway, Suite 300, Bethesda, Maryland 20814 (assignee), desires to acquire the entire right, title, and interest in the application and invention, and to any United States patents to be obtained therefor;

Now therefore, for valuable consideration, receipt whereof is hereby acknowledged,

We, the above named assignors, hereby sell, assign and transfer to the above named assignee, its successors and assigns, the entire right, title and interest in the application and the invention disclosed therein for the United States of America and all countries foreign thereto, including rights of priority under the International Convention of Paris (1883) as amended, and we request the Director of the U.S. Patent and Trademark Office to issue any Letters Patent granted upon the invention set forth in the application to the assignee, its successors and assigns; and we hereby agree that the assignee may apply for foreign Letters Patent on the invention and we will execute without further consideration all papers deemed necessary by the assignee in connection with the United States and foreign applications when called upon to do so by the assignee.

Further, we agree that we will communicate to assignee, or its representatives, any facts known to us respecting said invention, and testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, substitution, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to assignee, make all rightful oaths and generally do everything possible to aid assignee and its successors and assigns to obtain and enforce proper protection for the invention in the United States and in any and all foreign countries.

By: \_\_\_\_\_ Date: \_\_\_\_\_  
Nigel Simmons

By: \_\_\_\_\_ Date: \_\_\_\_\_  
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By: \_\_\_\_\_ Date: \_\_\_\_\_  
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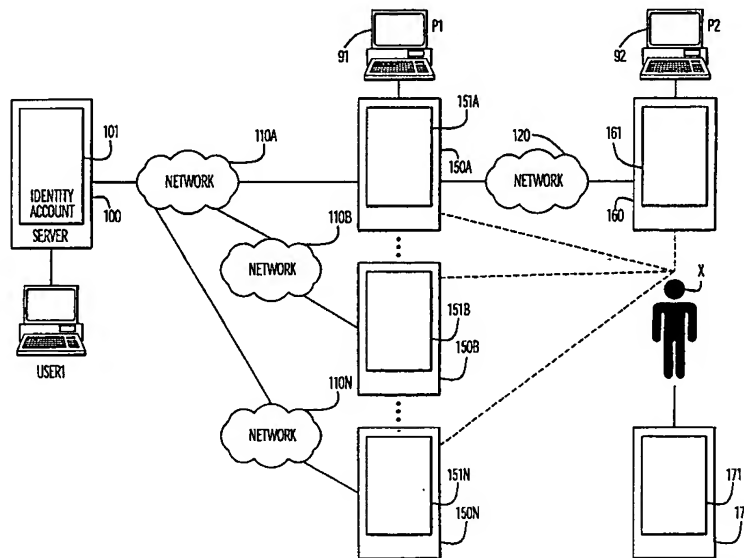
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(54) Title: SOCIAL NETWORK OF IDENTITIES AND QUERY METHOD THEREFOR



(57) Abstract: The method of gathering information within a social network of identities in which people or other identities have social relationships with one another, such as personal or business relationships, and each person has an identity account (101) containing information about that person. The identity accounts reside on identity servers (150A, 150B, 150N) connected by way of a computer network (110A, 110B, 110N). Information, such as address and telephone information, is held in each person's identity account (101). The identity accounts (101) can be queried based on the social relationships to find information. One person can query a second person's contact information. The second person can then query others known to that second person for the information. Electronic contracts embody agreements between the people in the social network, specify the terms and conditions for using data in the identity accounts, and can limit the information returned to the person making the query.



- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

## **SOCIAL NETWORK OF IDENTITIES AND QUERY METHOD THEREFOR**

### **BACKGROUND OF THE INVENTION**

#### **1. Related Application**

[01] This application claims priority to U.S. provisional patent application Serial No. 60/487,191, filed July 15, 2003, which is incorporated herein by reference.

#### **2. Field of the Invention**

[02] The invention generally relates to computer networking. More particularly, the invention relates to a social network based on identities of individuals.

#### **3. Description of the Related Art**

[03] United States Patent Nos. 6,345,288 and 6,088,717, the paper "From Name Service to Identity Service: How XNS Builds on the DNS Model," July 9, 2002, ([http:// www.xns.org / pages/ From\\_Name\\_to\\_Identity.pdf](http://www.xns.org/pages/From_Name_to_Identity.pdf)), and the "XNS Technical Specifications," July 9, 2002, ([http://www.xns.org/pages/ XNS\\_Technical\\_Specs.pdf](http://www.xns.org/pages/XNS_Technical_Specs.pdf)), describe techniques for communicating information between entities represented as identities in a computer network based on an agreement between the entities which specifies the data to be transferred and/or exchanged. These references are incorporated herein by reference.

[04] The techniques described in these references, however, do not take advantage of social relationships that exist between entities, including people, organizations and businesses in order to assist entities in locating and sharing information. The social network of identities described herein uses these social relationships to help entities locate and share information.

### **SUMMARY OF THE INVENTION**

[05] A method of gathering information in a social network is described in which the information is requested by a first entity. The social network includes the first entity, a second entity and a third entity. The first and second entities have a social relationship, and the second and third entities have a social relationship. Each of the first, second and third entities have first, second and third identity accounts, respectively, embodied on one or more computers connected in a computer network. The first and second entities have an electronic contract specifying data the first and second entities have agreed to share, and the second and third entities have an electronic contract specifying data the second and third entities have agreed to share. The method includes receiving a request for the information requested by the first entity and searching for the information in response to the request. If the information is located in the second identity account, the method sends the information in response to the request for information if the information corresponds to the data specified in the electronic contract between the first and second entities. If the information is located in the

third identity account, the method sends the information in response to the request for the information if the information corresponds to the data specified in the electronic contract between the second and third entities.

[06]           The method can include the second entity identifying the third entity based on a social relationship between the second and third entities. In another alternative, the method sends the information in response to the request for information to the first identity if the information corresponds to the data specified in the electronic contract between the first and second entities if the located information has been sent to the second entity,

[07]           An apparatus is described here for participating in a computerized social network of users. The apparatus includes an identity account associated with a first one of the users in the social network, which contains information about the first user. The apparatus also includes an electronic contract specifying information in the identity account for sharing with a second one of the users in the social network. The apparatus further includes a means for qualifying the information specified in the identity account to be shared with the second user based on a type of relationship between the first and second users. In one instance, the type of relationship between the first and second user is a personal relationship and the means for qualifying the information specified in the identity account qualifies the information to output to the second user, information that is

suitable for sharing in a personal relationship. In another instance, the type of relationship between the first and second user is a business relationship and the means for qualifying the information specified in the identity account qualifies the information to output to the second user, information that is suitable for sharing in a business relationship. In still another instance, the relationship is reflected in the electronic contract. Here, the type of the relationship includes at least one of a person-to-person, person-to-business, person-to-organization, commercial, and business relationship.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

[08] Fig. 1 is an illustration of plurality of computers that form a social network based on the digital identities of people, organizational entities or resources, and the relationships between those people, organizational entities or resources. Such a network is referred to as a social network of identities.

[09] Fig. 2A is an illustration of an identity account used in the social network of Fig. 1.

[10] Fig. 2B is an illustration of a second embodiment of the identity account used in the social network of Fig. 1, which employs electronic contracts.

[11] Fig. 2C is an illustration of a third embodiment of the identity account used in the social network of Fig. 1, which employs electronic contracts.

[12] Fig. 2D is an illustration of a fourth embodiment of the identity account used in the social network of Fig. 1, which employs electronic contracts.

[13] Fig. 3 is a flowchart of a process for querying the social network of identities shown in Fig. 1.

[14] Figs. 4A and 4B show examples of logical relationships within a social network of identities that are used in querying the network.

### **DETAILED DESCRIPTION**

[15] The following description makes reference to the above drawings, in which like reference numerals designate like components.

[16] Fig. 1 shows a plurality of computers forming a social network of identities based on the entities using those computers. Such entities can include individual persons, organizations, businesses or other groups. The embodiments described below generally are described in terms of an individual person, however, it should be understood that a wide array of other types of entities, including businesses and organizations, can use the social networks described herein. The computers shown in Fig. 1 represent only one example of the types of devices that can be used to form the social network of identities. Other devices that can be used in the social network of identities include, but are not limited to, personal digital assistants ("PDA"), cellular telephones and many other types of computing devices

[17] In the social network of Fig. 1, a user, USER1, using a client workstation 90 has an established identity account 101 that resides on a server computer, such as USER1's identity server 100. An identity account contains information about a user, e.g., identity account 101 can contain USER1's personal contact information and USER1's work contact information and also may also be linked to other applications, e.g., USER1's electronic address book, that employ the information contained in the identity accounts.

[18] Identity server 100 can store and manage the identity accounts of many different users, although only one identity account 101 is shown in Fig. 1 for ease of illustration. Identity server 100 communicates over communications networks, such as the Internet (shown in Fig. 1 as a plurality of connected communication networks 110A, 110B through 110N) with other identity servers, such as identity servers 150A, 150B through 150N. Another identity server, identity server 150A, maintains the identity account of another person, P1, whose identity account 151A can communicate with USER1's identity account 101 over a network 110A. Similar to the communication connection between identity server 100 associated with USER1 and identity server 150A associated with P1, identity server 150A can communicate with another identity server, identity server 160, that contains an identity account 161 of another person, P2, whose identity account 161 can communicate with P1's identity account 151A over a network 120.



[19] The identity accounts shown in Fig. 1 hold information about an entity, here a person. This information describes certain attributes about the person to identify that person in some respect. For example, an identity account may contain a person's home and work contact information. Additionally, an identity account associated with a person may contain or reference contracts established between members of a social network of identities and a user associated with the identity account. These contracts govern the sharing of information between a user and another member of a social network of identities. The identity account can also contain, e.g., the contents of a user's electronic address book, the names and identities of other members of a social network of identities or links to other applications, such as a user's electronic address book.

[20] An exemplary embodiment of identity account 101 is conceptually illustrated in Fig. 2A. Fig. 2A shows an identity account containing information about USER1, such as a persistent identifier 101a for the entity, USER1, that is unique throughout the social network of identities, USER1's address 101b, company name 101c, title 101d, department 101e, and e-mail address 101f. In addition to identity account 101 shown in Fig. 2, a user may also have an electronic address book 102. In one embodiment, electronic address book 102 exists separate from identity account 101, but is linked to identity account 101 such that the when identity account 101 is searched, electronic address book 102 is also searched. In an alternative embodiment, electronic address book 102 is

incorporated into identity account 101 allowing the contents of electronic address book 102 to be searched. In another alternative embodiment, the contents of electronic address book 102 may be imported into identity account 101. Such an embodiment allows the context of the electronic address book 102 to be imported into identity account 102 in a format compatible with the query method described below, e.g., XML format.

[21] Fig. 2B illustrates another identity account that includes a plurality of contracts K1, K2...KN. Fig. 2B is similar to Fig. 2A, except that contracts 101g are contained within the identity account 101 of Fig. 2B. Contracts can reflect the relationships that exist between people in a social network of identities, as they specify the information or data that one person makes accessible to another person within the social network. More specifically, a contract defines the specific data items within the identity account of one person that are made accessible to the identity account of another person in the social network. For example, as illustrated in Fig. 2B, a contract K1 in identity account 101 of USER1 specifies whether certain information may be shared with another person's, e.g., P1's, identity account.

[22] A conventional digital identity account contract can be extended to indicate the type of relationship that exists between the respective entities. Knowing the type of relationship between two entities can sometimes facilitate a

search through the social network of identities. For example, if USER1 and P1 are both people, then the type of relationship between them can be indicated as a “person-to-person” relationship in the contract itself. Based on the type of relationship between two entities, there can be a common set of attributes present in all the contracts that reflect the same type of relationship. For example, all contracts of the type “person-to-person” can be configured to allow sharing of specific information, such as address information. This, however, is only one example of an attribute that could be common to all “person-to-person” type relationships.

[23] The relationships between entities having identity accounts can be further qualified. For example, the people in a “person-to-person” relationship can have a personal relationship as opposed to a strictly business relationship. Because these people have a personal relationship, a certain level of trust is implied between those people such that it is likely that they are willing to share more or different types of information than if their relationship is strictly a business relationship, for example. Capturing within a contract the type of relationship two entities share enables identity applications to leverage those relationships to effectively share information.

[24] Also, as illustrated in Fig. 2B, an identity account 101 can include a plurality of contracts 101g. Each of those contracts 101g represents a relationship

with another entity having an identity account in the social network. As discussed above, even though contracts within an identity account may specify different information to share under possibly different terms and conditions, contracts that reflect the same types of relationships between identity accounts can have common attributes. Also, the contracts between different identity accounts can reflect the different types of relationships that may exist between people and their respective identity accounts, i.e., P2 may be a personal friend and also a business colleague of P1, thus a contract between respective identity accounts of P2 and P1 can reflect both of the two above-mentioned different types of relationships.

[25] Another identity account 101 is shown in Fig. 2C which is similar to the identity account in Fig. 2B, except the contracts 101h are organized into different categories based on the types of relationships that they represent. For example, contracts K1, K2, and K4 represent relationships between USER1, who is associated with identity account 101, and other people, each associated with other identity accounts, where the other people are people with whom USER1 has personal relationships. Contracts K3 and K5 represent relationships between identity account 101 and other identity accounts, where those other identity accounts are for businesses. Contracts K6 and K7 reflect the relationships between identity account 101 and identity accounts for other entities that share a commercial relationship with USER1. Thus, the contracts 101h of Fig. 2C are categorized such that they respectively represent the types of relationships USER1

has with the other entities in the social network. However, unlike Fig. 2B, the contracts 101h in the identity account 101 of Fig. 2C do not contain therein information about the types of relationships between identity accounts. Rather that information is specified by the grouping of the contracts 101h.

[26] Similar to Figs. 2B and 2C, Fig. 2D also shows an exemplary embodiment of an identity account having contracts 101g therein. However, unlike Figs. 2B and 2C, Fig. 2D includes a table 110 that indicates the types of relationships reflected in the respective contracts 101g. For example, table 110 in Fig. 2D specifies that contracts K1, K2, and K4 reflect a person-to-person, personal relationships between identity account 101 and another identity account, contract K3 reflects a person-to-business relationship, that is a business relationship, and contract KN reflects a commercial relationship.

[27] In summary, Figs. 2B-2D, as described above, show how identity accounts and contracts contained therein can be associated with information about the type of relationship to qualify the terms of the contract. This qualification of the type of relationship is utilized in a social network to define the parameters of relationships between entities and their identity accounts and to reflect the types of relationships that exist between particular entities and their identity accounts.

[28] In the social network shown in Fig. 1, each identity account has a unique, persistent and immutable network identifier such as identifier 101a shown in Fig.

2A. An embodiment of the identifier takes the form “: HOSTID : IDENTITYID”.

An example of such an identifier is “urn:xri://.10.1.2.3:238” which specifies a host address “.10.1.2.3” and a particular user or resource identifier 238 located at host address 10.1.2.3. Such an identifier can be referenced in other identity accounts in the social network. Thus, the identifier being a unique identifier that identifies a specific resource can represent a link in the social network to that resource. For example, data in an identity account that relates to the identity account of a personal contact, e.g., P1, can also include information about the network location of that identity account by specifying its identifier. The identity account can also contain links to other applications, such as a user’s electronic address book. The social network of identities can link multiple identity accounts in the network to one another, where the links represent relationships that have been established between people. Such relationships can be enforced by the identity accounts using electronic contracts that dictate the actions one identity account may perform relative to another identity account with which it has the contract.

[29] Based on the social network of identities, as described above, a user can more easily obtain information about other entities than previously possible. For example, the network shown in Fig. 1 allows a user, e.g., USER1, to answer the question “Who do I know that directly or indirectly knows X?”, where X is the subject of USER1’s query.

[30] Fig. 3 shows an example of a process for making such a query. At step 110, USER1 in the social network of Fig. 1 uses a query interface accessed at client workstation 90 to input, at step 115, USER1's query and seek the answer to the question "Who do I know that directly or indirectly knows X?" at step 115. The inquiry can be input by way of typing, voice recognition or by using various other well known methods of inputting information.

[31] In step 120, P1's identity account 151A shown in Fig. 1 is accessed, where P1 is an entity that USER1 knows and with whom USER1 has a contract to share data. In this example, the server 150A and identity account 151A, shown in Fig. 1, are the server and identity account of person P1. Next, in step 125, the process determines whether P1 knows person X either directly or indirectly by searching P1's identity account 151A and possibly certain of P1's applications, such as P1's electronic address book, for X. That is, the process first determines whether P1 directly knows X. If P1 does not directly know X, the process then determines whether P1 indirectly knows X, possibly through P1's relationship with another person, e.g., P2, who has a contract to share data with P1. P1's identity account 151A sends a query to those identity accounts with which P1 has a contract to share information. In this example, identity account 151A sends a request containing USER1's query to identity account 161 associated with P2, P2 being a person with whom P1 has a contract to share information. Identity account 161 and possibly certain of P2's applications are then searched for X.

- [32] While in the above example, identity account 151A sends a request with the query to identity account 161 only if the search of identity account 151A is not successful in finding X, in an alternative embodiment identity account 161 is always searched regardless of whether X is found in identity account 151A.
- [33] If it is determined that P1 indirectly or directly knows X, then the process shown in Fig. 3 proceeds to step 130, where it is determined whether a contract or a chain of contracts exist allowing P1 to share the results of the query with USER1, as discussed below. If it is determined that such contracts exists, then the name of and possibly contact information for P1 can be displayed to USER1 in step 135. Alternatively, the results of the query can be sent to USER1. However, if it is determined that the contractual agreements do not allow P1 to disclose that P1 directly or indirectly knows X, then the process returns to operation 120 and a different identity account, e.g., identity account 151B, is then searched.
- [34] Figs. 4A and 4B depict examples of the types of relationships that can exist between members of a social network of identities and illustrates the contractual relationships between those entities. In Fig. 4A, USER1, P1 and P2 represent members of social network having identity accounts as shown in Fig. 1. X represents the subject of USER1's query "Who do I know that indirectly or directly knows X." Contracts exist between the identity accounts of USER1, P1 and P2 illustrated by the lines connecting those entities. For example, as shown in



Fig. 4A, USER1 and P2 have a contract  $K_B$  and P2 and P1 have a contract  $K_C$ . Accordingly, USER1 directly knows P1 and P2 as shown in Fig. 4A, and USER1 indirectly knows X through both P1 and P2. The contracts govern the sharing of information between the members of the social network.

[35] As an example of the searching operation, assume USER1 directly knows P1 who directly knows P2 (as shown in Fig. 4B). A query of P1's identity account does not locate X. However, a query of P2's identity account determines that P2 does know X. In this example, before P2 shares information with P1, it must first be determined if the terms of contract  $K_C$  allow P2 to share the information with P1. If so, the information is sent to P1. Then it must be determined if contract  $K_C$  allows P1 to share the information with USER1. It must also be determined if the terms of contract  $K_A$  permit P1 to share the information with USER1. If all the contracts in the chain of contracts between USER1 and the entity having information about X permit USER1 to ultimately view the information, the information is sent to USER1 for display to USER1 at client workstation 90. Alternatively, USER1 could receive a notification of which member of the social network has the information that USER1 has inquired about. USER1 could thus request that information from its source. Thus, contracts must exist between all identity accounts that communicate during a particular query in order for information to be passed from one identity account to another.

[36] Returning to operation 125 in Fig. 3, if P1 does not directly or indirectly have a relationship with X, then the process returns to operation 120, and the identity account of the next entity that has a contract with P1's identity account, is accessed to determine whether this next entity directly or indirectly has a relationship with X. Thus, the query process shown in Fig. 3 is a sequential process of iterating through contracts within the identity account. However, the query process is not limited to such a sequential query process, and alternatively a parallel query process could be used.

[37] In one embodiment, the information stored in the identity accounts is stored as XML data according to an XML schema, the XML schema having a variety of attributes. One example of an XML scheme would be a contact schema. The contact schema has several defined attributes, e.g., name, home phone number, work phone number, work address, home address, work e-mail address, home e-mail address, etc. When USER1 accesses the query interface at step 110, USER1 is required to input a structured query corresponding to the attributes of the appropriate XML schema, here the contact schema. As an example, USER1 may input USER1's query into a field that will query the work address attribute of the contact schema. For example, USER1 may input "1600 Pennsylvania Avenue" into the work address field of the query interface. The querying process as described above and illustrated in Fig. 3 will then search the work address attributes of the appropriate identity accounts for any identity

accounts containing "1600 Pennsylvania Avenue." Another attribute that can exist in the contact schema is profession. This attribute would support searches over the social network by job function. For example, USER1 could query his social contacts with the query "who do I know who knows an accountant?" The social network query would query all the people who USER1 directly knows. The identity accounts for those people would respond to the query with the contact information of accountants in their electronic address books. Since USER1 directly knows the people whose identity accounts respond to the query, USER1 has a certain degree of trust that the responses include the names of accountants who USER1 would want to contact. Similarly, the identity accounts for people who USER1 indirectly knows will respond with names of accountants that are in the electronic address books of those people. USER1 might give less weight to the names of the accountants that came from indirect contacts, however USER1 accords a certain amount of weight to that information based on USER1 knowing the respondents indirectly.

- [38] The information in the identity account can be qualified, using attributes in an XML schema to correspond with the social relationship between the entities. For example, certain XML attributes can be classified as corresponding to a person-to-person relationship (e.g., home address, home telephone number, etc.). Other attributes (e.g., business address, business phone, etc.) can be qualified using XML attributes to correspond with a person-to-business or business-to-

business type relationship. Using various query mechanisms, such as XQuery for XML, searching for information based on social relationships can be accomplished.

[39]           Additionally, a contract within a specific identity account can be configured to allow other identity accounts with which the specific identity account corresponds, to automatically receive information from the specific identity account when information changes therein. That is, when information in an identity account changes, that information can be propagated to other identity accounts in accordance with the contractual terms between the respective identity accounts.

[40]           For example, if address information in identity account 161 is changed, the changed information can be “pushed” to another identity account 151A based on a contractual obligation to push this information to identity account 151A when it changes. The mechanisms for performing the above-described push operation can exist within the contract itself. Also, it should be recognized that the above described propagation process is only one example of a method by which information can be distributed in the social network of identities. Identity account 151A can then push the changed address information to identity account 101 if identity account 151A had previously sent similar information to identity account 101 in response to a query and the chain of contracts so permits.

[41] Having described embodiments invention as set forth above, it is believed that other modifications, variations and changes will be suggested to those skilled in the art in view of the teachings set forth herein. It is therefore to be understood that all such variations, modifications and changes are believed to fall within the scope of the present invention as defined by the appended claims. Although specific terms are employed herein, they are used in their ordinary and accustomed manner only, unless expressly defined differently herein, and not for purposes of limitation.

WHAT IS CLAIMED IS:

1. A method of gathering information in a social network requested by a first entity, wherein the social network includes the first entity, a second entity and a third entity, the first and second entities having a social relationship, and the second and third entities having a social relationship, wherein each of the first, second and third entities have first, second and third identity accounts, respectively, embodied on one or more computers connected in a computer network, wherein the first and second entities have an electronic contract specifying data the first and second entities have agreed to share, and the second and third entities have an electronic contract specifying data the second and third entities have agreed to share, the method comprising,
  - receiving a request for the information requested by the first entity;
  - searching for the information in response to the request; and
  - if the information is located in the second identity account, sending the information in response to the request for information if the information corresponds to the data specified in the electronic contract between the first and second entities, and if the information is located in the third identity account, sending the information in response to the request for the information if the

information corresponds to the data specified in the electronic contract between the second and third entities.

2. The method according to claim 1, wherein the second entity identifies the third entity based on a social relationship between the second and third entities.

3. The method according to claim 1, wherein if the information located in response to the request for the information is sent to the second entity, sending the information in response to the request for information to the first identity if the information corresponds to the data specified in the electronic contract between the first and second entities.

4. An apparatus for participating in a computerized social network of users, comprising:

an identity account associated with a first one of the users in the social network, the identity account having information about the first user;

an electronic contract specifying information in the identity account for sharing with a second one of the users in the social network; and

means for qualifying the information specified in the identity account to be shared with the second user based on a type of relationship between the first and second users.

5. The apparatus of claim 4, wherein the type of relationship between the first and second user is a personal relationship and the means for qualifying the information specified in the identity account qualifies the information to output to the second user information that is suitable for sharing in a personal relationship.

6. The apparatus of claim 4, wherein the type of relationship between the first and second user is a business relationship and the means for qualifying the information specified in the identity account qualifies the information to output to the second user information that is suitable for sharing in a business relationship.

7. The apparatus according to claim 4, wherein a type of the relationship is reflected in the electronic contract.

8. The apparatus according to claim 7, wherein the type of the relationship comprises at least one of person-to-person, person-to-business, person-to-organization, commercial, and business.



9. A method of obtaining information about an entity among a plurality of entities in a social network, wherein the social network includes a plurality of identity accounts associated with the plurality of entities, respectively, wherein between the plurality of identity accounts are electronic contracts, the method comprising:

requesting information related to the entity; and

receiving the requested information related to the entity based at least on a social relationship established between the entity and a second entity having an identity account.

10. The method according to claim 9, wherein the entity is one of a person, a business, a group, and an organization.

11. The method according to claim 9, wherein the relationship is based on an electronic contract between the entity and the second entity.

12. The method according to claim 9, wherein a type of the relationship is reflected in an electronic contract.

13. The method according to claim 12, wherein the type of the relationship comprises at least one of person-to-person, person-to-business, person-to-organization, commercial, and business.

14. A method of obtaining information in a social network, the social network having a plurality of identity accounts wherein each identity account of the first plurality of identity accounts is associated with an entity and wherein an exchange of information between the plurality of identity accounts is governed by electronic contracts, the method comprising:

a first identity account receiving a query from a second identity account, the exchange of information between the first identity account and second identity account being governed by an electronic contract, the query containing a request for certain information about the contents of the first identity account;

searching the first identity account for the certain information to determine if the first identity account contains the certain information;

if the first identity account contains the certain information, determining if the first identity account is permitted to exchange the certain information with the second identity account based on the electronic contract between the first identity account and the second identity account; and

sending the certain information to the second identity account if it is determined that the electronic contract so permits.

15. The method according to claim 14, wherein if in response to searching the first identity account for the certain information it is determined that the certain information is not contained in the first identity account, the first identity account queries a first plurality of identity accounts with which the first identity account has an electronic contract to exchange information;

if any of the identity accounts of the first plurality of identity accounts contains the certain information, determining if said any of the identity accounts of the first plurality of identity accounts is permitted to exchange the certain information with the first identity account based on the electronic contract between the first identity account and said any of the identity accounts of the first plurality of identity accounts; and

sending the certain information to the first identity account if it is determined that the electronic contract between the first identity account and said any identity accounts of the first plurality of identity accounts permits exchanging the certain information.

16. The method according to claim 15, wherein after searching the first identity account for the certain information, the first identity account queries a first plurality of identity accounts with which the first identity account has an electronic contract to exchange information;

if any of the identity accounts of the first plurality of identity accounts contains the certain information, determining if said any of the identity accounts of the first plurality of identity accounts is permitted to exchange the certain information with the first identity account based on the electronic contract between the first identity account and said any of the identity accounts of the first plurality of identity accounts; and

sending the certain information to the first identity account if it is determined that the electronic contract between the first identity account and said any identity accounts of the first plurality of identity accounts permits exchanging the certain information.

17. The method according to claim 15, wherein if the first identity account receives the information from said any of the identity accounts of the first plurality of identity accounts, the information is sent to the second identity account if it is determined if the electronic contract between the first identity account and the second identity account permits exchanging the certain information.

18. The method according to claim 16, wherein if the first identity account receives the information from said any of the identity accounts of the first plurality of identity accounts, the information is sent to the second identity

account if it is determined if the electronic contract between the first identity account and the second identity account permits exchanging the certain information.

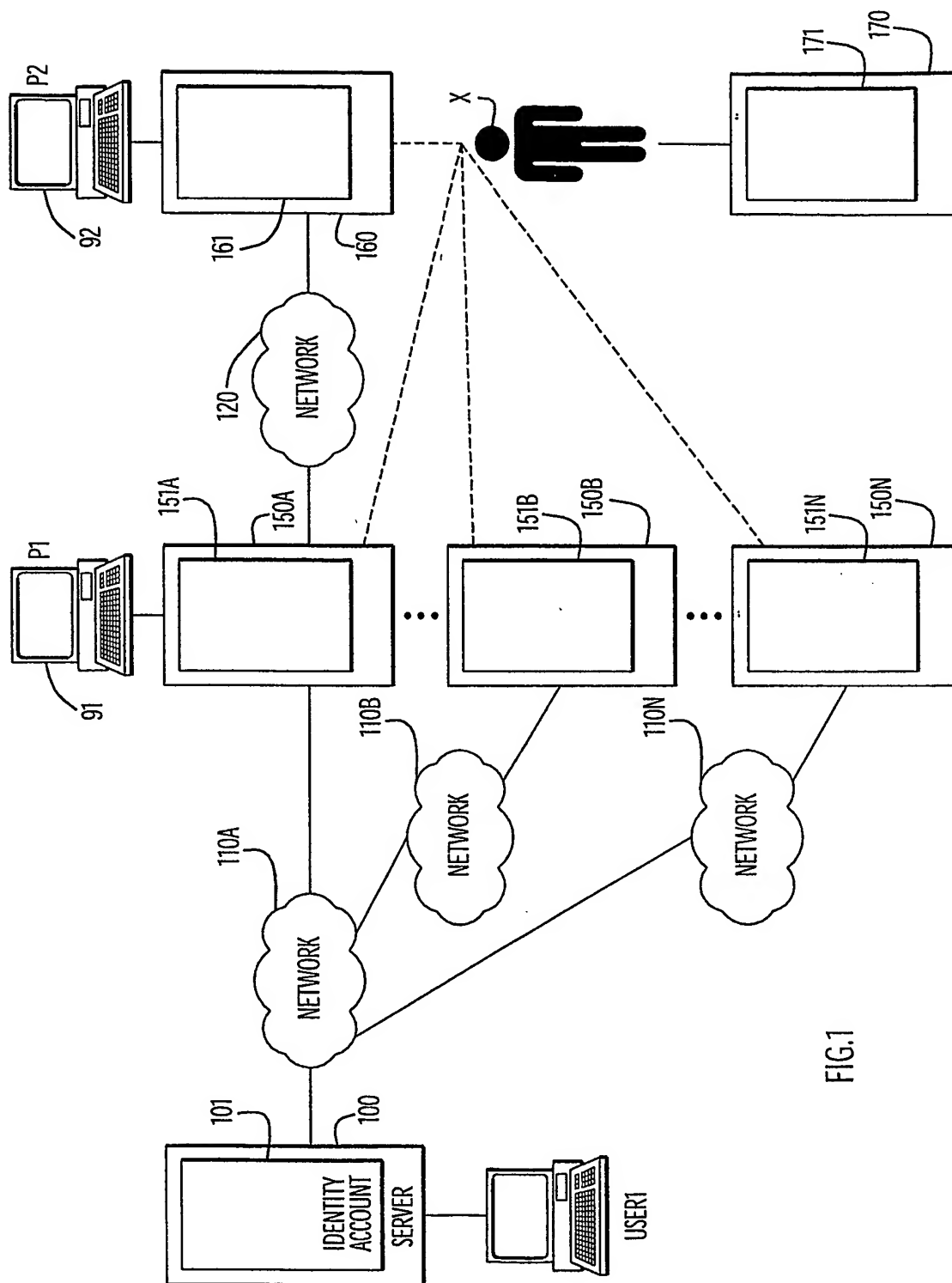


FIG.1

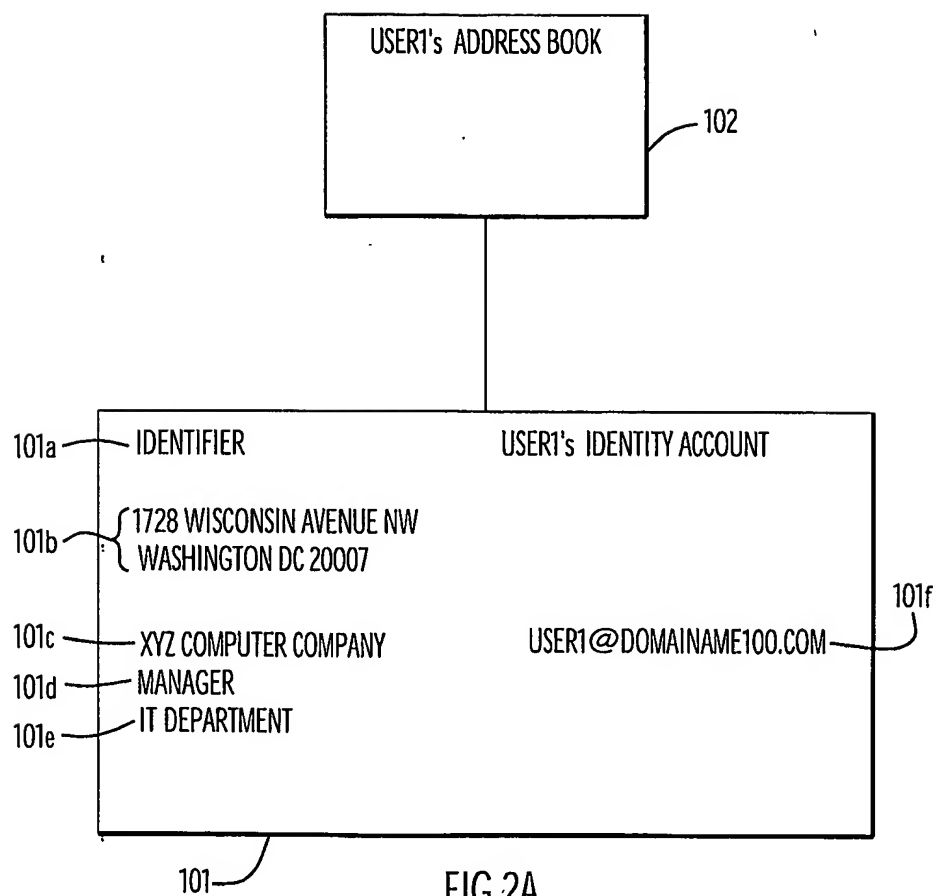


FIG.2A

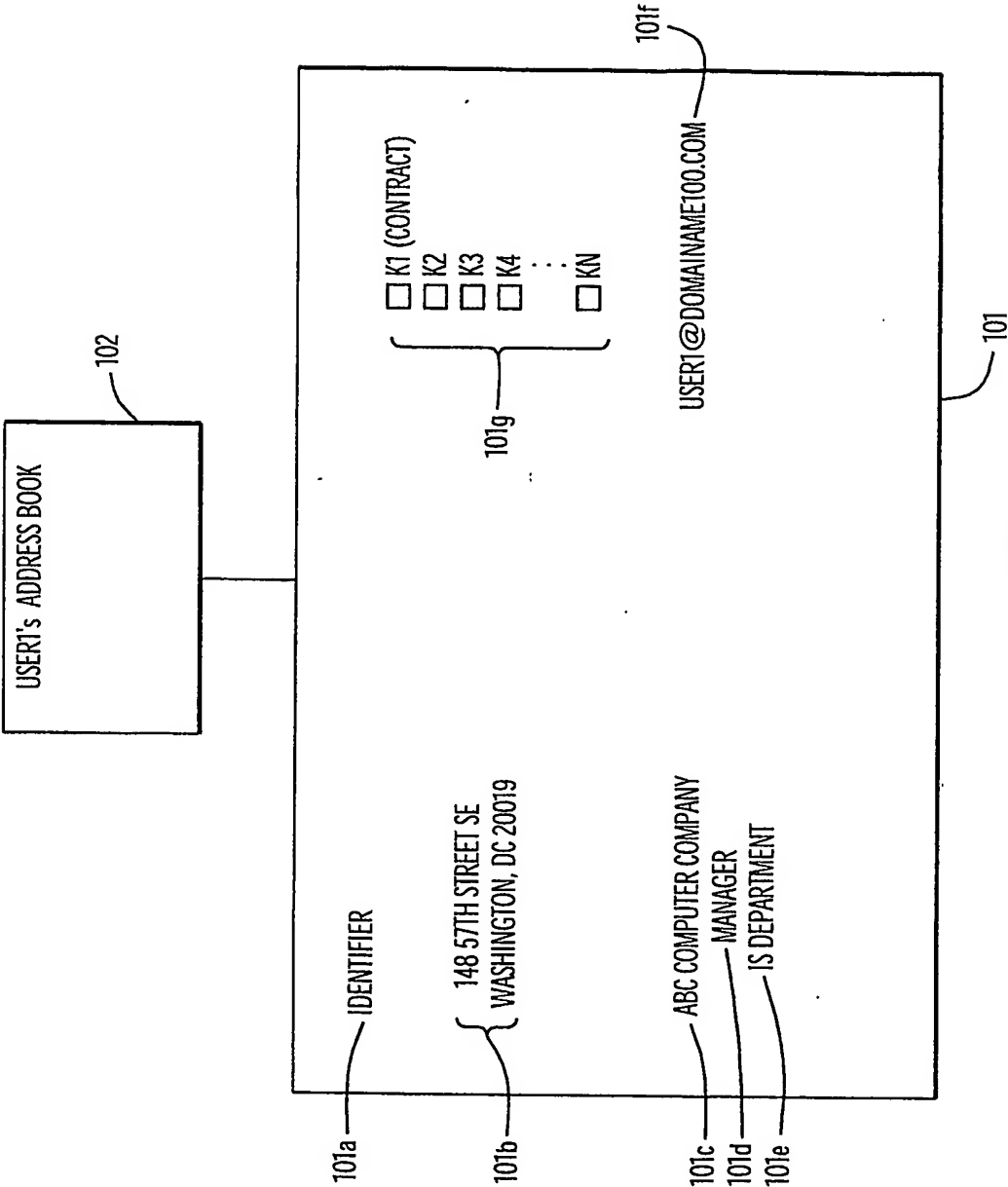


FIG.2B



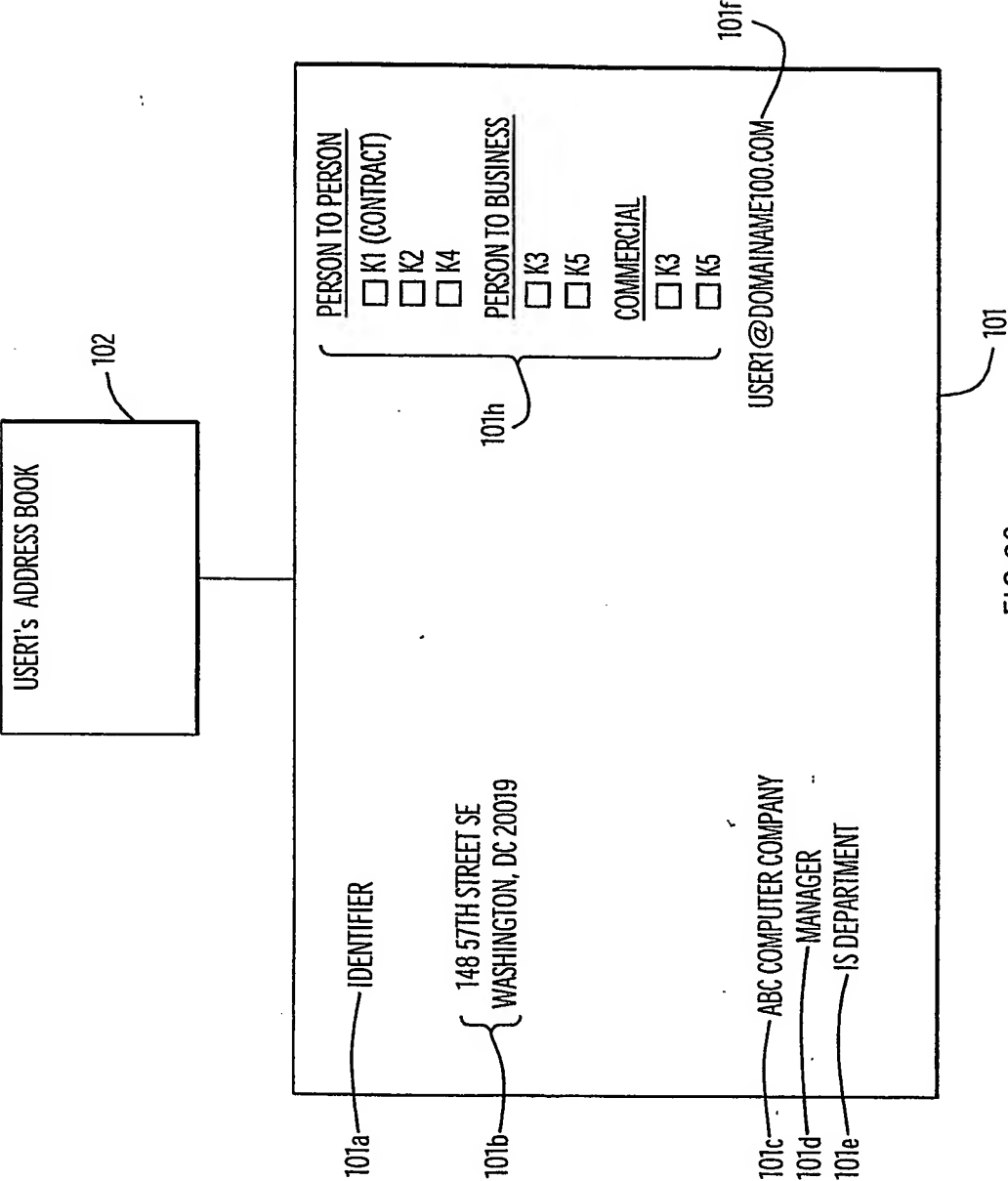
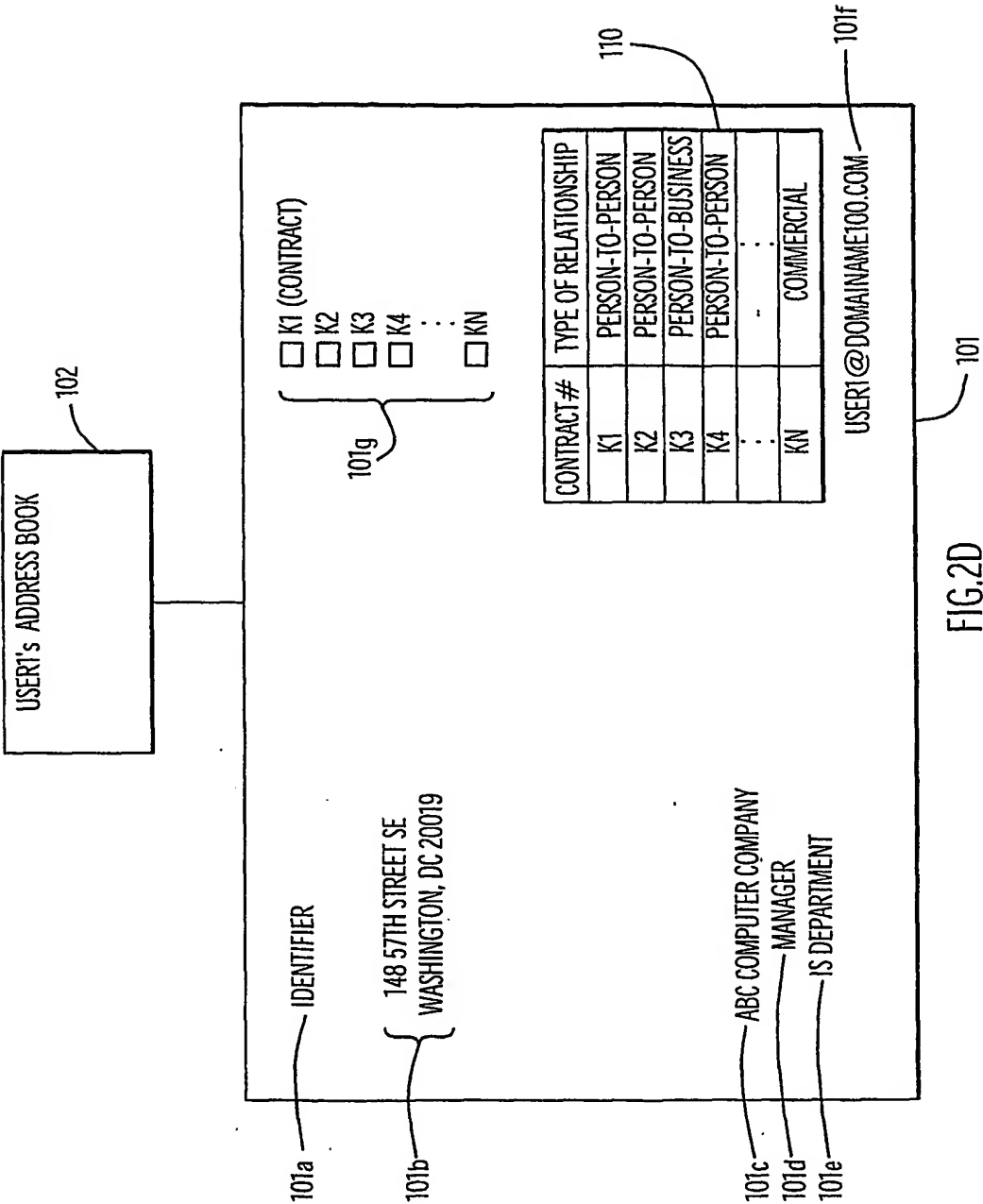


FIG. 2C



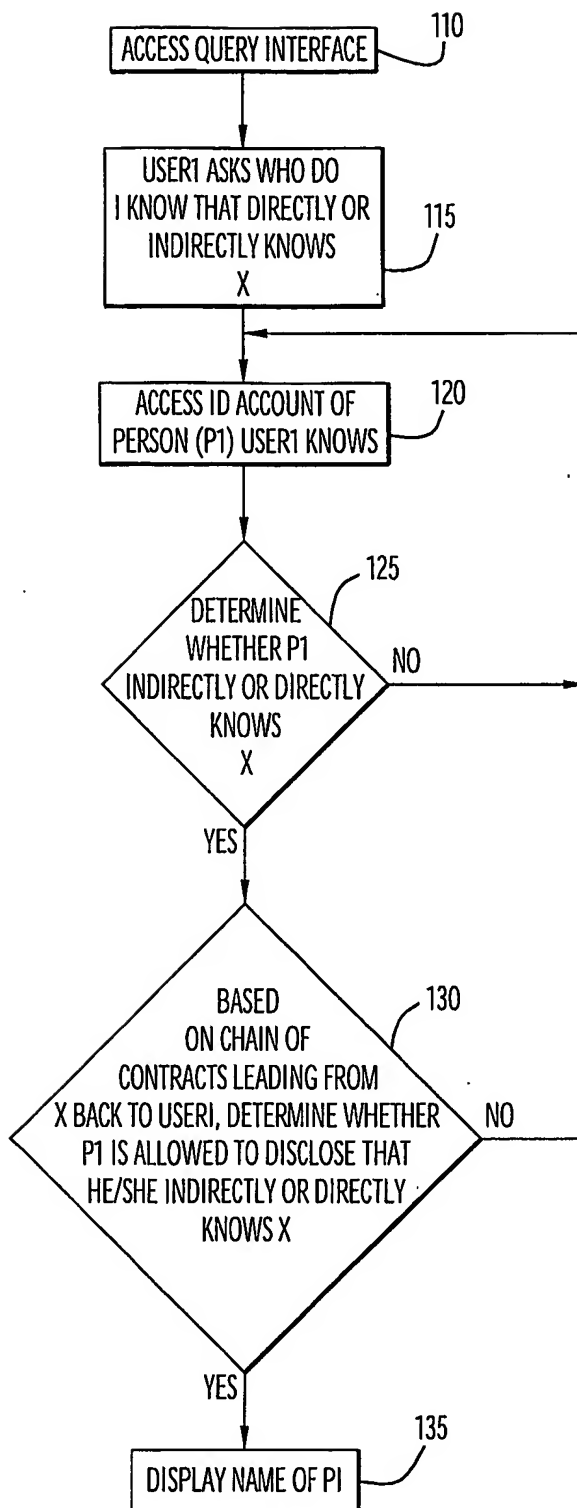


FIG.3

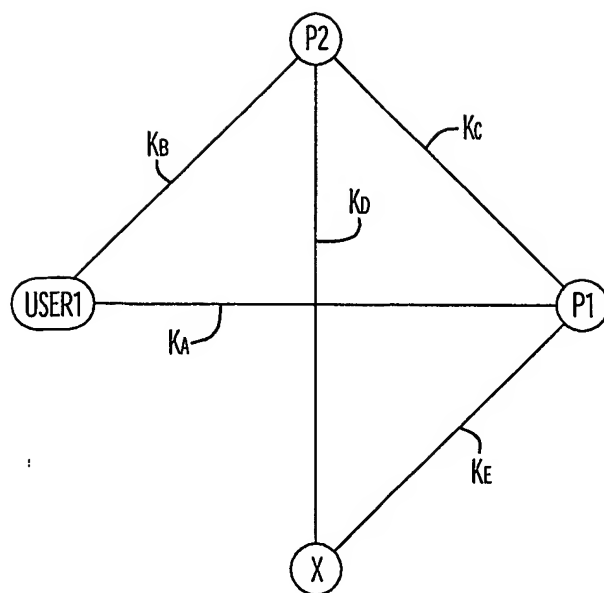


FIG. 4A

RELATIONSHIPS

USER1-P1 ( $K_A$ )  
USER1-P2 ( $K_B$ )  
P1-P2 ( $K_C$ )  
P2-X ( $K_D$ )  
P1-X ( $K_E$ )

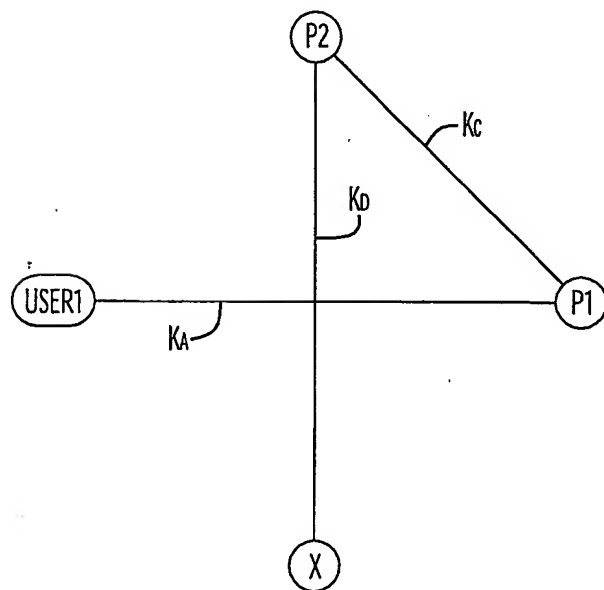


FIG. 4B

RELATIONSHIPS

USER1-P1 ( $K_A$ )  
P1-P2 ( $K_C$ )  
P2-X ( $K_D$ )

In re Appln. of Nigel Simmons et al.  
Appln. No. 10,564,638  
Statement of Facts

## Exhibit 5

# BEST AVAILABLE COPY

**edEx** Express **US Airbill** FedEx Tracking Number **8581 1868 8647**

From **11/28/02** Sender's FedEx Account Number **2360-0344-2**

Sender's Name **SCOTT BIRNBAUM** Phone **(301) 951-3034**

Company **EPOK INC**

Address **4340 E WEST HWY STE 300**

City **BETHESDA** State **MD** ZIP **20814-4411**

Your Internal Billing Reference  
First 24 characters will appear on invoice

To Recipient's Name **Adarbad Master** Phone ( )

Company **[Signature]**

Recipient's Address **12410 India Street #1910**

We cannot deliver to PO, boxes or PO ZIP codes

Address  
To request a package be held at a specific FedEx location, print FedEx address here:  
City **San Diego** State **CA** ZIP **92101**  
**0338196996**

**Store your addresses at fedex.com**  
Simplify your shipping. Manage your account. Access all the tools you need.

**0215** **Sender's Copy**

**4a Express Package Service**  
☒ **FedEx Priority Overnight** Next business morning. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.  
☐ **FedEx Standard Overnight** Next business afternoon. Saturday Delivery NOT available.  
☐ **FedEx First Overnight** Earliest next business morning delivery to select locations. Saturday Delivery NOT available.  
☐ **FedEx 2Day** Second business day. Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.  
☐ **FedEx Express Saver** Third business day. Saturday Delivery NOT available.  
\* To meet locations.

**4b Express Freight Service**  
☐ **FedEx 1Day Freight** Next business day. Friday shipments will be delivered on Monday unless SATURDAY Delivery is selected.  
☐ **FedEx 2Day Freight** Second business day. Thursday shipments will be delivered on Monday unless SATURDAY Delivery is selected.  
☐ **FedEx 3Day Freight** Third business day. Saturday Delivery NOT available.  
\* Call for Confirmation. \*\* To meet locations.

**5 Packaging**  
☒ **FedEx Envelope** \* ☐ **FedEx Pak** \* Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sundry Pak. ☐ **FedEx Box** ☐ **FedEx Tube** ☐ **Other**  
\* Declared value limit \$500.

**6 Special Handling**  
☐ **SATURDAY Delivery** NOT Available for FedEx Standard Overnight, FedEx First Overnight, FedEx Express Saver, or FedEx 1Day Freight.  
☐ **HOLD Weekday at FedEx Location** NOT Available for FedEx First Overnight.  
☐ **HOLD Saturday at FedEx Location** Available ONLY for FedEx Priority Overnight and FedEx 2Day to select locations.  
Does this shipment contain dangerous goods?  
One box must be checked.  
☒ **No** ☐ **Yes** As per attached Shipper's Declaration. ☐ **Yes** Shipper's Declaration not required. ☐ **Dry Ice** Dry Ice, 9 UN 1845 ☐ **Cargo Aircraft Only**  
Dangerous goods (including dry ice) cannot be shipped in FedEx packaging.

**7 Payment Bill to:** Enter FedEx Acct. No. or Credit Card No. below.  
☒ **Sender** Acct. No. in Section 1 will be billed. ☐ **Recipient** ☐ **Third Party** ☐ **Credit Card** ☐ **Cash/Check**  
FedEx Acct. No. Credit Card No. Exp. Date

Total Packages	Total Weight	Total Declared Value <sup>1</sup>
1	25	\$ 0.00

<sup>1</sup>Our liability is limited to \$100 unless you declare a higher value. See back for details. By using this Airbill you agree to the service conditions on the back of this Airbill and in the current FedEx Service Guide, including terms that limit our liability. FedEx Use Only

**8 NEW Residential Delivery Signature Options** If you require a signature, check Direct or Indirect.  
☐ **No Signature Required** Packages may be left without obtaining a signature for delivery.  
☒ **Direct Signature** Anyone at recipient's address may sign for delivery. FedEx applies.  
☐ **Indirect Signature** If no one is available at recipient's address, anyone at a neighboring address may sign for delivery. FedEx applies.  
**519**

# Track Shipments

## Detailed Results

[? Quick Help](#)

<b>Tracking number</b>	858118688647	<b>Delivered to</b>	Residence
<b>Signed for by</b>	M.CLOUGH	<b>Service type</b>	Priority Envelope
<b>Ship date</b>	Nov 28, 2006		
<b>Delivery date</b>	Nov 30, 2006 9:51 AM		
<b>Status</b>	Delivered		

Date/Time	Activity	Location	Details
Nov 30, 2006	9:51 AM <b>Delivered</b>		
	9:48 AM Delivery exception	SAN DIEGO, CA	Customer not available or business closed
	8:45 AM On FedEx vehicle for delivery	SAN DIEGO, CA	
Nov 29, 2006	9:44 AM Delivery exception	SAN DIEGO, CA	Customer not available or business closed
	8:52 AM At dest sort facility	SAN DIEGO, CA	
	8:45 AM On FedEx vehicle for delivery	SAN DIEGO, CA	
	8:00 AM At dest sort facility	SAN DIEGO, CA	
	6:49 AM At local FedEx facility	SAN DIEGO, CA	
	5:19 AM At dest sort facility	SAN DIEGO, CA	
	4:25 AM Departed FedEx location	INDIANAPOLIS, IN	
	12:36 AM Arrived at FedEx location	INDIANAPOLIS, IN	
Nov 28, 2006	10:04 PM Left origin	ROCKVILLE, MD	
	7:30 PM Picked up	ROCKVILLE, MD	

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[E-mail results](#)
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Subscribe to tracking updates (optional)

Your Name:  Your E-mail Address:

E-mail address	Language	Exception updates	Delivery updates
<input type="text"/>	English <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="text"/>	English <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="text"/>	English <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="text"/>	English <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Select format: ☒ HTML ☐ Text ☐ Wireless